

and Middle Plateau, 2 to 3; Southern Plateau, 0 to 1; California, 0 to 3; coast of Oregon and Washington Ty., 6 to 11.

Hail—But few hail-storms have been reported during the month. The only stations reporting more than one storm are: Pikes Peak, 6; Summit, Col., 7; De Soto and Omaha, Neb., 3. Two states report two separate storms in one day, on the 12th at Ames and Monticello, Iowa; 23rd Bellefontaine and Jacksonburg, Ohio. Hail fell 1st, at Cincinnati and Buffalo; 2nd, Chicago; 6th, Georgetown, Col., Kansas City, Mo., and Wellington, Kan.; 12th, Milwaukee, "large enough to kill fowls;" 13th, Lawrence, Kan.; 14th, Yankton, Dak.; 16th, Chambersburg, Pa.; 21st, Wilsonville, Ala.; 22nd, Mt. Washington; 23rd, Corvuing, Mo., and Freehold, N. J.; 28th, Ft. Keogh, Montana, large size and doing much damage. No hail was reported west of the Rocky Mountains.

Snow—Red Bluff, Cal., 21st, on coast range; on the summit of Pike's Peak, 4th to 6th, 7th, 12th, 13th, 15th, 16th, 19th to 21st, 28th and 29th; Virginia City, 29th, on mountains near; Summit, Col., 13th, 16th, 28th; Carson City, Nev., 28th, on mountains near; Burlington, Vt., 17th, on mountains near, two inches; Mt. Bridger, near Ft. Ellis, Montana.

Droughts—Throughout the month droughts were reported as existing in Utah, the Lower Missouri valley, the Upper Mississippi valley, northeastern part of Pennsylvania, and southeastern Michigan. Droughts commencing late in the month continued on the 31st in eastern Wisconsin, northeastern Illinois and Indiana. The droughts reported as prevailing in Nevada and Texas at the end of July ended in Nevada, excepting in the Humboldt valley, on the 1st of August; in Texas from the 9th to the 12th, except in Navarro county, where creeks and tanks were reported dry and stock suffering dreadfully at the end of August. On Carson river, Nevada, all mills were reported shut down on 22nd, for lack of water.

Floods and Water-spouts—3rd, near Milton, Pa., on the west branch of the Susquehanna; 11th, water-spout at entrance to Pensacola Bay, at 11.20 a. m., course from southwest to northeast; 16th, Mayport, Fla., moved over the sea from southwest to northeast for about four miles, and then broke; 12th to 14th, high water in the Rio Grande river overflowing the valley between Rio Grande City and Brownsville, doing considerable damage.

RELATIVE HUMIDITY.

The percentages of mean Relative Humidity for the month range as follows: New England, 65 to 87; Middle Atlantic States, 71 to 83; South Atlantic States, 69 to 84; Gulf States, 69 to 85; Ohio valley and Tennessee, 62 to 77; Lower Lakes, 64 to 72; Upper Lakes, 63 to 70; Upper Mississippi valley, 61 to 68; Lower Missouri valley, 60 to 65; Red River of the North valley, 63 to 76; Rocky Mountain Slope, 49 to 66; Plateau districts, 22 to 70; California, 31 to 78; Oregon, 33 to 59. *High stations* report the following averages, not corrected for altitude: Mt. Washington, 83.9; Pike's Peak, 52.3.

WINDS.

The prevailing winds, at the Signal Corps stations, are shown by the arrows flying with the wind on chart No. II. The *maxima velocities* per hour have been given in the descriptions of movements of areas of low pressure.

Total movements of the air—The following were the *largest* monthly movements in miles recorded at the Signal Corps stations: Mt. Washington, 18,638; Cape Lookout, 12,656; Portsmouth, N. C., 11,954; Kittyhawk, 18,982; Cape Hatteras, 10,501; Pikes Peak, 10,470; Sandy Hook, 9,613; Cape May, 9,406; Barnegat, 9,213; Dodge City, 8,661; Indianola, 8,554; San Francisco, 8,264; North Platte, 8,111. The smallest movements were: Silver City, N. M., 848; La Mesilla, 1,148; Fredericksburg, Texas, 1,818; Nashville, 1,920; Graham, 1,928; Lynchburg, 2,019; Tucson, 2,051; Roseburg, 2,144; Deadwood, 2,254; El Paso, 2,322; Visalia, 2,374.

Local Storms—On the 3rd a heavy wind storm at Phoenix, Arizona. 14th, heavy storm at Portland, Maine, blowing down houses, uprooting trees &c., in the adjoining country. From the 17th to the 19th a series of violent storms were reported along the Atlantic coast from South Carolina to Maine in connection with the cyclone which then passed along the coast. 22nd, Biloxi, Miss., whirlwind about one hundred feet wide passed through the centre of the Sea Shore Camp Grounds, demolishing five cabins and taking off a portion of the roof of the tabernacle, scattering it some three hundred feet. Large oak trees were lifted out by the roots and in some instances broken off short. One person fatally and one seriously injured. On the 28th, at 4.20 p. m. a violent gale from the northwest occurred at Fort Keogh, Montana. The wind attained a velocity of 52 miles at 4.45 p. m., and was accompanied by heavy rain and large hailstones, the latter doing much injury. Several buildings were seriously damaged. The storm lasted 35 minutes.

VERIFICATIONS.

Indications—The detailed comparison of the tri-daily weather indications for June with the telegraphic reports for the succeeding twenty-four hours, shows the general percentage of omissions to be 2.44 per cent, and of verifications to be 84.0 per cent. The percentages for the four elements have been, Weather, 92.4; Direction of the Wind, 84.1; Temperature, 83.6; Barometer, 74.7. The percentages of verifications by geograph-